

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 6 May 2005 (06.05.2005)

(10) International Publication Number WO 2005/041311 A1

- (51) International Patent Classification⁷: H01L 29/786. 21/336, 21/768, 21/288, 21/3205, G02F 1/1368
- (21) International Application Number:

PCT/JP2004/016183

- (22) International Filing Date: 25 October 2004 (25.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003-368166

28 October 2003 (28.10.2003)

- (71) Applicant (for all designated States except US): SEMI-CONDUCTOR ENERGY LABORATORY CO., LTD. [JP/JP]; 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): YAMAZAKI, Shunpei [JP/JP]; c/o Semiconductor Energy Laboratory Co., Ltd., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP). MAEKAWA, Shinji [JP/JP]; c/o Semiconductor Energy Laboratory Co., Ltd., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP). FURUNO, Makoto [JP/JP]; c/o Semiconductor Energy Laboratory Co., Ltd., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP). NAKAMURA, Osamu [JP/JP]; c/o Semiconductor Energy Laboratory Co., Ltd., 398, Hase, Atsugi-shi, Kanagawa 2430036

(JP). IMAI, Keitaro [JP/JP]; c/o Semiconductor Energy Laboratory Co., Ltd., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIOUID CRYSTAL DISPLAY DEVICE AND METHOD FOR MANUFACTURING THE SAME, AND LIQUID **CRYSTAL TELEVISION RECIEVER**





